GenCore version 5.1.6

OM protein - nucleic search, using frame_plus_p2n model

Run on: June 23, 2003, 17:08:13 ; Search time 50 Seconds
(without alignments)
1367.778 Million cell updates/sec

Title: US-09-817-199B-2
Perfect score: 1150
Sequence: 1 MTGTPGAVATRDGEAPERSP.....FQIRDYVESQKKRSSCCSFM 223

Scoring table: BLOSUM62
Xgapop 10.0 , Xgapext 0.5
Ygapop 10.0 , Ygapext 0.5
Fgapop 6.0 , Fgapext 7.0
Delop 6.0 , Delext 7.0

Searched: 441362 seqs, 153338381 residues

Total number of hits satisfying chosen parameters: 882724

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Command line parameters:
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-DB=Issued_Patents_NA -QFMT=fastap -SUFFIX=p2n.rni -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER=US09817199_@CGN_1_1_40_@runat_18062003_145102_810 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7

Database : Issued_Patents_NA:*
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2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1150	100.0	2612	4	US-09-484-970B-142	Sequence 142, App
2	1140	99.1	875	4	US-09-075-454-10	Sequence 10, Appl
3	731	63.6	1340	2	US-08-824-873-2	Sequence 2, Appli
4	731	63.6	1340	3	US-09-198-184-2	Sequence 2, Appli
5	470	40.9	925	2	US-08-916-901-4	Sequence 4, Appli
6	470	40.9	925	4	US-09-154-602-4	Sequence 4, Appli
7	448.5	39.0	639	4	US-09-399-913-66	Sequence 66, Appl
8	385	33.5	970	3	US-08-888-077A-28	Sequence 28, Appl
9	372	32.3	803	4	US-09-075-454-13	Sequence 13, Appl
10	359	31.2	847	2	US-08-773-423-4	Sequence 4, Appli
11	302.5	26.3	1175	2	US-08-773-423-6	Sequence 6, Appli
12	296	25.7	820	3	US-08-741-411-6	Sequence 6, Appli
13	294.5	25.6	1533	4	US-09-075-454-11	Sequence 11, Appl
14	291	25.3	1172	4	US-09-075-454-8	Sequence 8, Appli
15	284.5	24.7	848	3	US-08-741-411-2	Sequence 2, Appli
16	279	24.3	1749	4	US-09-149-476-54	Sequence 54, Appl
17	277	24.1	1255	2	US-08-766-551-6	Sequence 6, Appli
18	265.5	23.1	607	2	US-08-429-964-85	Sequence 85, Appl
19	265.5	23.1	4480	4	US-09-167-322-12	Sequence 12, Appl
20	264.5	23.0	574	2	US-08-429-964-83	Sequence 83, Appl
21	262.5	22.8	5775	1	US-08-306-691B-15	Sequence 15, Appl
22	262.5	22.8	5775	5	PCT-US93-06251-29	Sequence 29, Appl
23	258.5	22.5	890	3	US-08-741-411-4	Sequence 4, Appli
24	256.5	22.3	1334	2	US-08-916-901-2	Sequence 2, Appli
25	256.5	22.3	1334	4	US-09-154-602-2	Sequence 2, Appli
26	253	22.0	615	1	US-08-247-946A-5	Sequence 5, Appli
27	253	22.0	615	5	PCT-US95-06420-5	Sequence 5, Appli
28	252.5	22.0	1098	2	US-08-948-616-6	Sequence 6, Appli
29	252.5	22.0	1098	2	US-09-193-510-6	Sequence 6, Appli
30	252.5	22.0	1098	4	US-09-368-402-6	Sequence 6, Appli
31	251.5	21.9	1407	4	US-09-493-914-1	Sequence 1, Appli
32	250	21.7	2436	1	US-08-306-691B-16	Sequence 16, Appl
33	249.5	21.7	985	4	US-08-842-306B-1	Sequence 1, Appli
34	249.5	21.7	985	4	US-08-838-973B-1	Sequence 1, Appli
35	249.5	21.7	985	4	US-08-771-212A-1	Sequence 1, Appli
36	249.5	21.7	3198	4	US-08-842-306B-48	Sequence 48, Appl
37	249.5	21.7	3198	4	US-08-838-973B-48	Sequence 48, Appl
38	248.5	21.6	603	4	US-09-325-932A-29	Sequence 29, Appl
39	248.5	21.6	932	4	US-09-325-932A-28	Sequence 28, Appl
40	245	21.3	570	4	US-08-884-866A-2	Sequence 2, Appli
41	245	21.3	570	4	US-08-884-866A-11	Sequence 11, Appl
42	243	21.1	914	2	US-08-773-423-2	Sequence 2, Appli
43	241.5	21.0	702	3	US-08-842-976-2	Sequence 2, Appli
44	241.5	21.0	702	3	US-09-213-397-2	Sequence 2, Appli
45	241.5	21.0	702	3	US-09-416-489-2	Sequence 2, Appli

ALIGNMENTS

RESULT 1
US-09-484-970B-142
; Sequence 142, Application US/09484970B
; Patent No. 6426186
; GENERAL INFORMATION:
; APPLICANT: Jones, Karen A.
; APPLICANT: Volkmuth, Wayne
; APPLICANT: Walker, Michael G.
; TITLE OF INVENTION: BONE REMODELING GENES
; FILE REFERENCE: PB-0014 US
; CURRENT APPLICATION NUMBER: US/09/484,970B
; CURRENT FILING DATE: 2000-01-18
; NUMBER OF SEQ ID NOS: 172
; SOFTWARE: PERL Program
; SEQ ID NO 142
; LENGTH: 2612
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No. 6426186 412477.1CB1
US-09-484-970B-142

Alignment Scores:

Pred. No.:	3.4e-146	Length:	2612
Score:	1150.00	Matches:	223
Percent Similarity:	100.00%	Conservative:	0
Best Local Similarity:	100.00%	Mismatches:	0
Query Match:	100.00%	Indels:	0
DB:	4	Gaps:	0

US-09-817-199B-2 (1-223) x US-09-484-970B-142 (1-2612)

Qy 1 MetThrGlyThrProGlyAlaValAlaThrArgAspGlyGluAlaProGluArgSerPro 20
Db 16 ATGACGGGCACGCCAGGCGCCGTTGCCACCCGGGATGGCGAGGCCCCCGAGCGCTCCCCG 75

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Qy         21 ProCysSerProSerTyrAspLeuThrGlyLysValMetLeuLeuGlyAspThrGlyVal 40
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         76 CCCTGCAGTCCGAGCTACGACCTCACGGGCAAGGTGATGCTTCTGGGAGACACAGGCGTC 135

Qy         41 GlyLysThrCysPheLeuIleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIle 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        136 GGCAAAACATGTTTCCTGATCCAATTCAAAGACGGGGCCTTCCTGTCCGGAACCTTCATA 195

Qy         61 AlaThrValGlyIleAspPheArgAsnLysValValThrValAspGlyValArgValLys 80
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Db        196 GCCACCGTCGGCATAGACTTCAGGAACAAGGTGGTGACTGTGGATGGCGTGAGAGTGAAG 255

Qy         81 LeuGlnIleTrpAspThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyr 100
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        256 CTGCAGATCTGGGACACCGCTGGGCAGGAACGGTTCCGAAGCGTCACCCATGCTTATTAC 315

Qy        101 ArgAspAlaGlnAlaLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsn 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        316 AGAGATGCTCAGGCCTTGCTTCTGCTGTATGACATCACCAACAAATCTTCTTTCGACAAC 375

Qy        121 IleArgAlaTrpLeuThrGluIleHisGluTyrAlaGlnArgAspValValIleMetLeu 140
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        376 ATCAGGGCCTGGCTCACTGAGATTCATGAGTATGCCCAGAGGGACGTGGTGATCATGCTG 435

Qy        141 LeuGlyAsnLysAlaAspMetSerSerGluArgValIleArgSerGluAspGlyGluThr 160
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Db        436 CTAGGCAACAAGGCGGATATGAGCAGCGAAAGAGTGATCCGTTCCGAAGACGGAGAGACC 495

Qy        161 LeuAlaArgGluTyrGlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnVal 180
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Db        496 TTGGCCAGGGAGTACGGTGTTCCCTTCCTGGAGACCAGCGCCAAGACTGGCATGAATGTG 555

Qy        181 GluLeuAlaPheLeuAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGlnAlaAsp 200
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        556 GAGTTAGCCTTTCTGGCCATCGCCAAGGAACTGAAATACCGGGCCGGGCATCAGGCGGAT 615

Qy        201 GluProSerPheGlnIleArgAspTyrValGluSerGlnLysLysArgSerSerCysCys 220
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Db        616 GAGCCCAGCTTCCAGATCCGAGACTATGTAGAGTCCCAGAAGAAGCGCTCCAGCTGCTGC 675

Qy        221 SerPheMet 223
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Db        676 TCCTTCATG 684
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RESULT 2
US-09-075-454-10
; Sequence 10, Application US/09075454
; Patent No. 6391580
; GENERAL INFORMATION:
; APPLICANT: Hillman, Jennifer L.
; APPLICANT: Tang, Y. Tom
; APPLICANT: Lal, Preeti
; APPLICANT: Guegler, Karl J.
; APPLICANT: Corley, Neil C.
; APPLICANT: Patterson, Chandra
; APPLICANT: Batra, Sajeev
; APPLICANT: Baughn, Mariah R.
; TITLE OF INVENTION: RAS PROTEINS
; NUMBER OF SEQUENCES: 14
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
; STREET: 3174 Porter Drive
; CITY: Palo Alto
; STATE: CA
; COUNTRY: US
; ZIP: 94304
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: Word Perfect 6.1/MS-DOS 6.2
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/075,454
; FILING DATE: Herewith
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/766,551
; FILING DATE: DECEMBER 12, 1996
; ATTORNEY/AGENT INFORMATION:
; NAME: Cerrone, Michael C.
; REGISTRATION NUMBER: 39,132
; REFERENCE/DOCKET NUMBER: PF-0168-1 CIP
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 650-855-0555
; TELEFAX: 650-845-4166
; TELEX:
; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 875 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; IMMEDIATE SOURCE:
; LIBRARY: UCMCL5T01
; CLONE: 1528559
US-09-075-454-10

Alignment Scores:

Pred. No.:	1.34e-145	Length:	875
Score:	1140.00	Matches:	221
Percent Similarity:	100.00%	Conservative:	0
Best Local Similarity:	100.00%	Mismatches:	0
Query Match:	99.13%	Indels:	0
DB:	4	Gaps:	0

US-09-817-199B-2 (1-223) x US-09-075-454-10 (1-875)

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Qy         23 SerProSerTyrAspLeuThrGlyLysValMetLeuLeuGlyAspThrGlyValGlyLys 42
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         63 AGTCCGAGCTACGACCTCACGGGCAAGGTGATGCTTCTGGGAGACACAGGCGTCGGCAAA 122

Qy         43 ThrCysPheLeuIleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIleAlaThr 62
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Db        123 ACATGTTTCCTGATCCAATTCAAAGACGGGGCCTTCCTGTCCGGAACCTTCATAGCCACC 182

Qy         63 ValGlyIleAspPheArgAsnLysValValThrValAspGlyValArgValLysLeuGln 82
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        183 GTCGGCATAGACTTCAGGAACAAGGTGGTGACTGTGGATGGCGTGAGAGTGAAGCTGCAG 242

Qy         83 IleTrpAspThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrArgAsp 102
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        243 ATCTGGGACACCGCTGGGCAGGAACGGTTCCGAAGCGTCACCCATGCTTATTACAGAGAT 302

Qy        103 AlaGlnAlaLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnIleArg 122
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        303 GCTCAGGCCTTGCTTCTGCTGTATGACATCACCAACAAATCTTCTTTCGACAACATCAGG 362

Qy        123 AlaTrpLeuThrGluIleHisGluTyrAlaGlnArgAspValValIleMetLeuLeuGly 142
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        363 GCCTGGCTCACTGAGATTCATGAGTATGCCCAGAGGGACGTGGTGATCATGCTGCTAGGC 422

Qy        143 AsnLysAlaAspMetSerSerGluArgValIleArgSerGluAspGlyGluThrLeuAla 162
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        423 AACAAGGCGGATATGAGCAGCGAAAGAGTGATCCGTTCCGAAGACGGAGAGACCTTGGCC 482

Qy        163 ArgGluTyrGlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeu 182
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        483 AGGGAGTACGGTGTTCCCTTCCTGGAGACCAGCGCCAAGACTGGCATGAATGTGGAGTTA 542

Qy        183 AlaPheLeuAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGlnAlaAspGluPro 202
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
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Db        543 GCCTTTCTGGCCATCGCCAAGGAACTGAAATACCGGGCCGGGCATCAGGCGGATGAGCCC 602

Qy        203 SerPheGlnIleArgAspTyrValGluSerGlnLysLysArgSerSerCysCysSerPhe 222
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        603 AGCTTCCAGATCCGAGACTATGTAGAGTCCCAGAAGAAGCGCTCCAGCTGCTGCTCCTTC 662

Qy        223 Met 223
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Db        663 ATG 665

RESULT 3
US-08-824-873-2
; Sequence 2, Application US/08824873
; Patent No. 5843717
;  GENERAL INFORMATION:
;    APPLICANT:  Hillman, Jennifer L.
;    APPLICANT:  Guegler, Karl
;    TITLE OF INVENTION:  NOVEL RAB PROTEIN
;    NUMBER OF SEQUENCES:  4
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Incyte Pharmaceuticals, Inc.
;      STREET:  3174 Porter Drive
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/824,873
;      FILING DATE:  Filed Herewith
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Billings, Lucy J.
;      REGISTRATION NUMBER:  36,749
;      REFERENCE/DOCKET NUMBER:  PF-0240 US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415-855-0555
;      TELEFAX:  415-845-4166
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1340 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    IMMEDIATE SOURCE:
;      LIBRARY:  PANCNOT04
;      CLONE:  738957
US-08-824-873-2

Alignment Scores:
Pred. No.:              1.34e-89        Length:         1340
Score:                  731.00          Matches:        141
Percent Similarity:     86.73%          Conservative:   29
Best Local Similarity:  71.94%          Mismatches:     25
Query Match:            63.57%          Indels:         2
DB:                     2               Gaps:           0

US-09-817-199B-2 (1-223) x US-08-824-873-2 (1-1340)

Qy         26 TyrAspLeuThrGlyLysValMetLeuLeuGlyAspThrGlyValGlyLysThrCysPhe 45
              |||||||::      ||||||||||||:::||||||:::||||||||||||||||||
Db         22 TACGACGTCGCCTTCAAGGTCATGCTGGTGGGGGACTCGGGTGTGGGGAAGACCTGTCTG 81

Qy         46 Leu-IleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIleAlaThrValGlyIl 65
              ||| ::::::||||||||||||||||||||:::||||||||||||:::||||||   ||
Db         82 CTGGGTGCGATTCAAGGATGGTGCTTTCCTGGCGGGGACCTTCATCTCCACCGTAGC-AT 140

Qy         65 eAspPheArgAsnLysValValThrValAspGlyValArgValLysLeuGlnIleTrpAs 85
              ||||||||||||||||||:::   ||||||||||||:::||||||||||||:::||||||
Db        141 TGACTTCCGGAACAAAGTTCTGGACGTGGATGGTGTGAAGGTGAAGCTGCAGATGTGGGA 200

Qy         85 pThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrArgAspAlaGlnAl 105
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||   ||
Db        201 CACAGCTGGTCAGGAGCGGTTCCGCAGTGTTACCCATGCCTACTACCGGGATGCTCATGC 260

Qy        105 aLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnIleArgAlaTrpLe 125
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Db        261 TCTGCTGCTGCTCTACGATGTCACCAACAAGGCCTCCTTTGACAACATCCAGGCCTGGCT 320

Qy        125 uThrGluIleHisGluTyrAlaGlnArgAspValValIleMetLeuLeuGlyAsnLysAl 145
              ||||||||||||||||||||||||   ||||||   :::||||||||||||||||||||
Db        321 GACCGAGATCCACGAGTACGCCCAGCACGACGTGGCGCTCATGCTGCTGGGGAACAAGGT 380

Qy        145 aAspMetSerSerGluArgValIleArgSerGluAspGlyGluThrLeuAlaArgGluTy 165
              |||   :::   ||||||||:::::   ||||||||||||   ||||||:::||||||
Db        381 GGACTCTGCCCATGAGCGTGTGGTGAAGAGGGAGGACGGGGAGAAGCTGGCCAAGGAGTA 440

Qy        165 rGlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeuAlaPheLe 185
              ||||:::||||||:::||||||||||||||||||||||:::||||||:::||||||||||
Db        441 TGGACTGCCCTTCATGGAGACCAGCGCCAAGACGGGCCTCAACGTGGACTTGGCCTTCAC 500

Qy        185 uAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGlnAlaAspGluProSerPheGl 205
              |||||||||||||||||||   |||:::              ||||||   |||::
Db        501 AGCCATAGCAAAGGAGTTGAAGCAGCGCTCCATGAAGGCTCCCAGCGAGCCGCGCTTCCG 560

Qy        205 nIleArgAspTyrValGluSerGlnLysLysArgSerSerCysCys 220
              ::::   ||||||||:::   :::   :::   :::||||||||||
Db        561 GCTGCATGATTACGTTAAGAGGGAGGGTCGAGGGGCCTCCTGCTGC 606

RESULT 4
US-09-198-184-2
; Sequence 2, Application US/09198184
; Patent No. 6010859
;  GENERAL INFORMATION:
;    APPLICANT:  Hillman, Jennifer L.
;    APPLICANT:  Guegler, Karl
;    TITLE OF INVENTION:  NOVEL RAB PROTEIN
;    NUMBER OF SEQUENCES:  4
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Incyte Pharmaceuticals, Inc.
;      STREET:  3174 Porter Drive
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/198,184
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/824,873
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Billings, Lucy J.
;      REGISTRATION NUMBER:  36,749
;      REFERENCE/DOCKET NUMBER:  PF-0240 US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415-855-0555
;      TELEFAX:  415-845-4166
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1340 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
```

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;      TOPOLOGY:  linear
;    IMMEDIATE SOURCE:
;      LIBRARY:  PANCNOT04
;      CLONE:  738957
US-09-198-184-2

Alignment Scores:
Pred. No.:                1.34e-89        Length:          1340
Score:                    731.00          Matches:         141
Percent Similarity:       86.73%          Conservative:    29
Best Local Similarity:    71.94%          Mismatches:      25
Query Match:              63.57%          Indels:          2
DB:                       3               Gaps:            0

US-09-817-199B-2 (1-223) x US-09-198-184-2 (1-1340)

Qy         26 TyrAspLeuThrGlyLysValMetLeuLeuGlyAspThrGlyValGlyLysThrCysPhe 45
              ||||||:::     |||||||||||:::|||||||:::|||||||||||||||||||
Db         22 TACGACGTCGCCTTCAAGGTCATGCTGGTGGGGGACTCGGGTGTGGGGAAGACCTGTCTG 81

Qy         46 Leu-IleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIleAlaThrValGlyIl 65
              ||| ::::::|||||||||||||||||||:::|||||||||||||:::||||||   ||
Db         82 CTGGGTGCGATTCAAGGATGGTGCTTTCCTGGCGGGGACCTTCATCTCCACCGTAGC-AT 140

Qy         65 eAspPheArgAsnLysValValThrValAspGlyValArgValLysLeuGlnIleTrpAs 85
              ||||||||||||||||||::   |||||||||||:::|||||||||||||:::||||||
Db        141 TGACTTCCGGAACAAAGTTCTGGACGTGGATGGTGTGAAGGTGAAGCTGCAGATGTGGGA 200

Qy         85 pThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrArgAspAlaGlnAl 105
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||   ||
Db        201 CACAGCTGGTCAGGAGCGGTTCCGCAGTGTTACCCATGCCTACTACCGGGATGCTCATGC 260

Qy        105 aLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnIleArgAlaTrpLe 125
              ||||||||||||||||||:::||||||||||:::|||||||||||||||:::||||||||
Db        261 TCTGCTGCTGCTCTACGATGTCACCAACAAGGCCTCCTTTGACAACATCCAGGCCTGGCT 320

Qy        125 uThrGluIleHisGluTyrAlaGlnArgAspValValIleMetLeuLeuGlyAsnLysAl 145
              |||||||||||||||||||||||   ||||||   :::||||||||||||||||||||
Db        321 GACCGAGATCCACGAGTACGCCCAGCACGACGTGGCGCTCATGCTGCTGGGGAACAAGGT 380

Qy        145 aAspMetSerSerGluArgValIleArgSerGluAspGlyGluThrLeuAlaArgGluTy 165
              |||   :::   |||||||||::::::   ||||||||||||   ||||||:::||||||
Db        381 GGACTCTGCCCATGAGCGTGTGGTGAAGAGGGAGGACGGGGAGAAGCTGGCCAAGGAGTA 440

Qy        165 rGlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeuAlaPheLe 185
              ||||:::||||||:::||||||||||||||||||||:::|||||||:::||||||||||
Db        441 TGGACTGCCCTTCATGGAGACCAGCGCCAAGACGGGCCTCAACGTGGACTTGGCCTTCAC 500

Qy        185 uAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGlnAlaAspGluProSerPheGl 205
              ||||||||||||||||||||   |||:::              ||||||   |||::
Db        501 AGCCATAGCAAAGGAGTTGAAGCAGCGCTCCATGAAGGCTCCCAGCGAGCCGCGCTTCCG 560

Qy        205 nIleArgAspTyrValGluSerGlnLysLysArgSerSerCysCys 220
              ::::   ||||||||||:::   :::   :::   :::|||||||||
Db        561 GCTGCATGATTACGTTAAGAGGGAGGGTCGAGGGGCCTCCTGCTGC 606

RESULT 5
US-08-916-901-4
; Sequence 4, Application US/08916901
; Patent No. 5892012
;  GENERAL INFORMATION:
;    APPLICANT:  Hillman, Jennifer L.
;    APPLICANT:  Lal, Preeti
;    APPLICANT:  Corley, Neil C.
;    APPLICANT:  Shah, Purvi
;    TITLE OF INVENTION:  RAB PROTEINS
;    NUMBER OF SEQUENCES:  9
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Incyte Pharmaceuticals, Inc.
;      STREET:  3174 Porter Dr.
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/916,901
;      FILING DATE:  Filed Herewith
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Billings, Lucy J.
;      REGISTRATION NUMBER:  36,749
;      REFERENCE/DOCKET NUMBER:  PF-0367 US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415-855-0555
;      TELEFAX:  415-845-4166
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  925 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    IMMEDIATE SOURCE:
;      LIBRARY:  LIVRTUT04
;      CLONE:  2514506
US-08-916-901-4

Alignment Scores:
Pred. No.:                2.58e-54        Length:          925
Score:                    470.00          Matches:         88
Percent Similarity:       64.41%          Conservative:    55
Best Local Similarity:    39.64%          Mismatches:      73
Query Match:              40.87%          Indels:          6
DB:                       2               Gaps:            3

US-09-817-199B-2 (1-223) x US-08-916-901-4 (1-925)

Qy          3 GlyThrProGlyAlaValAlaThrArgAspGlyGluAlaProGluArgSerProProCys 22
              ||||||   |||      :::                  :::
Db          9 GGAACGGGAGGCGGACAGAGTCGACTGGGAGCGACCGAGCGGGCCGCCGCCGCCGCCATG 68

Qy         23 SerProSerTyrAspLeuThrGlyLysValMetLeuLeuGlyAspThrGlyValGlyLys 42
              :::|||   ||||||          |||::::::|||:::||||||:::||||||||||||
Db         69 AACCCCGAATATGACTACCTGTTTAAGCTGCTTTTGATTGGCGACTCAGGCGTGGGCAAG 128

Qy         43 ThrCysPheLeuIleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIleAlaThr 62
              :::|||   |||::::::|||   |||      :::   :::   ::::::|||:::|||
Db        129 TCATGCCTGCTCCTGCGGTTTGCTGATGACACGTAC---ACAGAGAGCTACATCAGCACC 185

Qy         63 ValGlyIleAspPheArgAsnLysValValThrValAspGlyValArgValLysLeuGln 82
              :::|||:::||||||:::   :::   :::   :::|||||||      :::|||||||||
Db        186 ATCGGGGTGGACTTCAAGATCCGAACCATCGAGCTGGATGGCAAAACTATCAAACTTCAG 245

Qy         83 IleTrpAspThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrArgAsp 102
              ||||||||||||||||||||||||||||||||||:::::|||   :::||||||||||
Db        246 ATCTGGGACACAGCGGGCCAGGAACGGTTCCGGACCATCACTTCCAGCTACTACCGGGGG 305

Qy        103 AlaGlnAlaLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnIleArg 122
              |||      ::::::::::::|||||:::|||:::::   |||:::   |||::::::
Db        306 GCTCATGGCATCATCGTGGTGTATGACGTCACTGACCAGGAATCCTACGCCAACGTGAAG 365

Qy        123 AlaTrpLeuThrGluIleHisGluTyrAlaGlnArgAspValValIleMetLeuLeuGly 142
                 ||||||   ||||||      ||||||      :::|||      :::|||:::|||
Db        366 CAGTGGCTGCAGGAGATTGACCGCTATGCCAGCGAGAACGTCAATAAGCTCCTGGTGGGC 425

Qy        143 AsnLysAlaAspMetSerSerGluArgValIleArgSerGluAspGlyGluThrLeuAla 162
              ||||||:::|||:::::::::::::::::|||:::   :::          :::   |||
Db        426 AACAAGAGCGACCTCACCACCAAGAAGGTGGTGGACAACACCACAGCCAAGGAGTTTGCA 485

Qy        163 ArgGluTyrGlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeu 182
```

```
                   |||:::|||||||||||||||||||||||||          |||||||||
Db        486 GACTCTCTGGGCATCCCCTTCTTGGAGACGAGCGCCAAGAATGCCACCAATGTCGAGCAG 545

Qy        183 AlaPheLeuAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGlnAla--------- 199
              ||||||:::   :::|||   |||:::|||   |||   |||       |||
Db        546 GCGTTCATGACCATGGCTGCTGAAATCAAAAAGCGGATGGGGCCTGGAGCAGCCTCTGGG 605

Qy        200 ---AspGluProSerPheGlnIleArgAspTyrValGluSerGlnLysLysArgSerSer 218
                  :::   |||:::   :::|||   |||         :::
Db        606 GGCGAGCGGCCCAATCTCAAGATC---GACAGCACCCCTGTAAAGCCGGCTGGCGGTGGC 662

Qy        219 CysCys 220
              ||||||
Db        663 TGTTGC 668

RESULT 6
US-09-154-602-4
; Sequence 4, Application US/09154602
; Patent No. 6300472
;  GENERAL INFORMATION:
;    APPLICANT:  Hillman, Jennifer L.
;    APPLICANT:  Lal, Preeti
;    APPLICANT:  Corley, Neil C.
;    APPLICANT:  Shah, Purvi
;    TITLE OF INVENTION:  RAB PROTEINS
;    NUMBER OF SEQUENCES:  9
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Incyte Pharmaceuticals, Inc.
;      STREET:  3174 Porter Dr.
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/154,602
;      FILING DATE:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/916,901
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Billings, Lucy J.
;      REGISTRATION NUMBER:  36,749
;      REFERENCE/DOCKET NUMBER:  PF-0367 US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415-855-0555
;      TELEFAX:  415-845-4166
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  925 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    IMMEDIATE SOURCE:
;      LIBRARY:  LIVRTUT04
;      CLONE:  2514506
US-09-154-602-4

Alignment Scores:
Pred. No.:              2.58e-54      Length:         925
Score:                  470.00        Matches:        88
Percent Similarity:     64.41%        Conservative:   55
Best Local Similarity:  39.64%        Mismatches:     73
Query Match:            40.87%        Indels:         6
DB:                     4             Gaps:           3

US-09-817-199B-2 (1-223) x US-09-154-602-4 (1-925)

Qy          3 GlyThrProGlyAlaValAlaThrArgAspGlyGluAlaProGluArgSerProProCys 22

              ||||||   |||      :::                          :::
Db          9 GGAACGGGAGGCGGACAGAGTCGACTGGGAGCGACCGAGCGGGCCGCCGCCGCCGCCATG 68

Qy         23 SerProSerTyrAspLeuThrGlyLysValMetLeuLeuGlyAspThrGlyValGlyLys 42
              :::|||  ||||||          |||:::::|||:::||||||:::|||||||||||||
Db         69 AACCCCGAATATGACTACCTGTTTAAGCTGCTTTTGATTGGCGACTCAGGCGTGGGCAAG 128

Qy         43 ThrCysPheLeuIleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIleAlaThr 62
              :::|||   |||:::::::|||   |||       :::   :::   :::::::|||:::|||
Db        129 TCATGCCTGCTCCTGCGGTTTGCTGATGACACGTAC---ACAGAGAGCTACATCAGCACC 185

Qy         63 ValGlyIleAspPheArgAsnLysValValThrValAspGlyValArgValLysLeuGln 82
              :::|||:::|||||||:::   :::   :::   :::||||||      :::|||||||||
Db        186 ATCGGGGTGGACTTCAAGATCCGAACCATCGAGCTGGATGGCAAAACTATCAAACTTCAG 245

Qy         83 IleTrpAspThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrArgAsp 102
              ||||||||||||||||||||||||||||||:::::|||   :::|||||||||
Db        246 ATCTGGGACACAGCGGGCCAGGAACGGTTCCGGACCATCACTTCCAGCTACTACCGGGGG 305

Qy        103 AlaGlnAlaLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnIleArg 122
              |||       :::::::::::|||||:::|||:::::::   |||:::   |||:::::::
Db        306 GCTCATGGCATCATCGTGGTGTATGACGTCACTGACCAGGAATCCTACGCCAACGTGAAG 365

Qy        123 AlaTrpLeuThrGluIleHisGluTyrAlaGlnArgAspValValIleMetLeuLeuGly 142
              ||||||   ||||||      ||||||      :::|||      :::|||:::|||
Db        366 CAGTGGCTGCAGGAGATTGACCGCTATGCCAGCGAGAACGTCAATAAGCTCCTGGTGGGC 425

Qy        143 AsnLysAlaAspMetSerSerGluArgValIleArgSerGluAspGlyGluThrLeuAla 162
              ||||||:::|||:::::::::::::::::|||:::   :::         :::      |||
Db        426 AACAAGAGCGACCTCACCACCAAGAAGGTGGTGGACAACACCACAGCCAAGGAGTTTGCA 485

Qy        163 ArgGluTyrGlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeu 182
                  |||:::|||||||||||||||||||||||          |||||||||
Db        486 GACTCTCTGGGCATCCCCTTCTTGGAGACGAGCGCCAAGAATGCCACCAATGTCGAGCAG 545

Qy        183 AlaPheLeuAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGlnAla--------- 199
              ||||||:::   :::|||   |||:::|||   |||   |||       |||
Db        546 GCGTTCATGACCATGGCTGCTGAAATCAAAAAGCGGATGGGGCCTGGAGCAGCCTCTGGG 605

Qy        200 ---AspGluProSerPheGlnIleArgAspTyrValGluSerGlnLysLysArgSerSer 218
                  :::   |||:::   :::|||   |||         :::
Db        606 GGCGAGCGGCCCAATCTCAAGATC---GACAGCACCCCTGTAAAGCCGGCTGGCGGTGGC 662

Qy        219 CysCys 220
              ||||||
Db        663 TGTTGC 668

RESULT 7
US-09-399-913-66
; Sequence 66, Application US/09399913
; Patent No. 6361971
; GENERAL INFORMATION:
;  APPLICANT: Rhodes, Kenneth
;  APPLICANT: Betty, Maria
;  APPLICANT: Ling, Huai-Ping
;  APPLICANT: An, Wenqian
;  TITLE OF INVENTION: POTASSIUM CHANNEL INTERACTORS AND USES THEREFOR
;  FILE REFERENCE: MNI-070CP2
;  CURRENT APPLICATION NUMBER: US/09/399,913
;  CURRENT FILING DATE: 1999-09-21
;  EARLIER APPLICATION NUMBER: USSN 60/110,277
;  EARLIER FILING DATE: 1998-11-30
;  EARLIER APPLICATION NUMBER: USSN 60/110,033
;  EARLIER FILING DATE: 1998-11-25
;  EARLIER APPLICATION NUMBER: USSN 60/109,333
;  EARLIER FILING DATE: 1998-11-20
;  EARLIER APPLICATION NUMBER: USSN 09/298,731
;  EARLIER FILING DATE: 1999-04-23
;  EARLIER APPLICATION NUMBER: USSN 09/350,614
;  EARLIER FILING DATE: 1999-07-09
;  EARLIER APPLICATION NUMBER: USSN 09/350,874
;  EARLIER FILING DATE: 1999-07-09
;  NUMBER OF SEQ ID NOS: 73
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;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 66
;   LENGTH: 639
;   TYPE: DNA
;   ORGANISM: Rattus sp.
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(636)
US-09-399-913-66

Alignment Scores:
Pred. No.:              1.2e-51       Length:          639
Score:                  448.50        Matches:         81
Percent Similarity:     72.46%        Conservative:    40
Best Local Similarity:  48.50%        Mismatches:      45
Query Match:            39.00%        Indels:          1
DB:                     4             Gaps:            1

US-09-817-199B-2 (1-223) x US-09-399-913-66 (1-639)

Qy         25 SerTyrAspLeuThrGlyLysValMetLeuLeuGlyAspThrGlyValGlyLysThrCys 44
              :::|||           |||   :::::::::|||||||||||||||||||||:::||| 
Db          4 GCGTACGCCTATCTCTTCAAGTACATCATCATCGGCGACACAGGTGTTGGTAAATCGTGC 63

Qy         45 PheLeuIleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIleAlaThrValGly 64
                 |||:::||||||   |||      |||                      |||:::||| 
Db         64 TTATTGCTACAGTTTACAGACAAGAGGTTT---CAGCCGGTGCATGACCTCACAATTGGT 120

Qy         65 IleAspPheArgAsnLysValValThrValAspGlyValArgValLysLeuGlnIleTrp 84
              :::::|||      :::::::::|||:::||||||   ::::::|||||||||||||||| 
Db        121 GTAGAGTTTGGTGCTCGAATGATAACCATTGATGGGAAACAGATAAAACTCCAGATCTGG 180

Qy         85 AspThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrArgAspAlaGln 104
              ||||||||||||||||   |||||||||:::|||   :::|||||||||   |||     
Db        181 GATACAGCAGGGCAGGAGTCCTTTCGTTCTATCACAAGGTCATATTACAGAGGTGCAGCG 240

Qy        105 AlaLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnIleArgAlaTrp 124
                    ||||||:::|||||||||||||   :::   :::|||:::::::::      |||
Db        241 GGGGCTTTACTAGTGTATGATATTACAAGGAGAGACACGTTCAACCACTTGACAACCTGG 300

Qy        125 LeuThrGluIleHisGluTyrAlaGlnArgAspValValIleMetLeuLeuGlyAsnLys 144
              |||   :::      :::::::::      ::::::||||||||||||:::|||||||||| 
Db        301 TTAGAAGACGCCCGTCAGCATTCCAATTCCAACATGGTCATCATGCTTATTGGAAATAAA 360

Qy        145 AlaAspMetSerSerGluArgValIleArgSerGluAspGlyGluThrLeuAlaArgGlu 164
              :::|||:::   |||   |||   ::::::   |||:::||||||     |||||||||  
Db        361 AGTGACTTAGAATCTAGGAGAGAAGTGAAAAAGGAAGAAGGTGAAGCTTTTGCACGAGAG 420

Qy        165 TyrGlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeuAlaPhe 184
              :::|||:::   |||:::||||||||||||||||||      |||||||||   ||||||  
Db        421 CATGGACTTATCTTCATGGAAACTTCTGCCAAGACTGCTTCTAATGTAGAGGAGGCATTT 480

Qy        185 LeuAlaIleAlaLysGluLeu 191
              :::      ||||||||||:::
Db        481 ATTAACACAGCAAAAGAAATT 501

RESULT 8
US-08-888-077A-28
; Sequence 28, Application US/08888077A
; Patent No. 6020143
;  GENERAL INFORMATION:
;    APPLICANT:  ST. GEORGE-HYSLOP, PETER H
;    APPLICANT:  ROMMENS, JOHANNA M
;    APPLICANT:  FRASER, PAUL E
;    TITLE OF INVENTION:  GENETIC SEQUENCES AND PROTEINS RELATED
;    TITLE OF INVENTION:  TO ALZHEIMER'S DISEASE AND USES THEREFOR.
;    NUMBER OF SEQUENCES:  41
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK
;      STREET:  600 SOUTH AVENUE WEST
;      CITY:  WESTFIELD
;      STATE:  NJ
;      COUNTRY:  USA
;      ZIP:  07090-1497
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/888,077A
;      FILING DATE:  03-JUL-1997
;      CLASSIFICATION:  530
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/592,541
;      FILING DATE:  26-JAN-1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  PALISI, THOMAS M
;      REGISTRATION NUMBER:  36,629
;      REFERENCE/DOCKET NUMBER:  SCHERING 3.0-017 CIP CIP CIP IV
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (908) 654-5000
;      TELEFAX:  (908) 654-7866
;  INFORMATION FOR SEQ ID NO:  28:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  970 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  1..970
;      OTHER INFORMATION:  /note= "Y2H9"
US-08-888-077A-28

Alignment Scores:
Pred. No.:              1.05e-42      Length:          970
Score:                  385.00        Matches:         86
Percent Similarity:     57.87%        Conservative:    39
Best Local Similarity:  39.81%        Mismatches:      76
Query Match:            33.48%        Indels:          16
DB:                     3             Gaps:            4

US-09-817-199B-2 (1-223) x US-08-888-077A-28 (1-970)

Qy          7 AlaValAlaThrArgAspGlyGluAlaProGluArgSerProProCysSerProSerTyr 26
              |||:::   |||||||||   |||                                 ||| 
Db         51 GCAATGGGCACCCGCGACGACGAG--------------------------------TAC 77

Qy         27 AspLeuThrGlyLysValMetLeuLeuGlyAspThrGlyValGlyLysThrCysPheLeu 46
              |||         ||||||:::|||:::||||||:::||||||||||||:::     |||  
Db         78 GACTACCTCTTTAAAGTTGTCCTTATTGGAGATTCTGGTGTTGGAAAGAGTAATCTCCTG 137

Qy         47 IleGlnPheLysAspGlyAlaPhe---LeuSerGlyThrPheIleAlaThrValGlyIle 65
                 :::|||            |||   |||                 :::|||:::|||::: 
Db        138 TCTCGATTTACTCGAAATGAGTTTAATCTGGAAAGCAAG------AGCACCATTGGAGTA 191

Qy         66 AspPheArgAsnLysValValThrValAspGlyValArgValLysLeuGlnIleTrpAsp 85
              :::|||      :::   :::   |||||||||      :::|||   ||||||||||| 
Db        192 GAGTTTGCAACAAGAAGCATCCAGGTTGATGGAAAAACAATAAAGGCACAGATATGGGAC 251

Qy         86 ThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrArgAspAlaGlnAla 105
              ||||||||||||||||||:::|||:::::|||   ||||||||||||   |||      
Db        252 ACAGCAGGGCAAGAGCGATATCGAGCTATAACATCAGCATATTATCGTGGAGCTGTAGGT 311

Qy        106 LeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnIleArgAlaTrpLeu 125
                 ||||||:::||||||||||           ::::::::::|||:::      ||||||
Db        312 GCCTTATTGGTTTATGACATTGCTAAACATCTCACATATGAAAATGTAGAGCGATGGCTG 371

Qy        126 ThrGluIleHisGluTyrAlaGlnArgAspValValIleMetLeuLeuGlyAsnLysAla 145
                 |||:::   :::::|||      ::::::||||||||||||:::||||||||:::  
Db        372 AAAGAACTGAGAGATCATGCTGATAGTAACATTGTTATCATGCTTGTGGGCAATAAGAGT 431

Qy        146 AspMetSerSerGluArgValIleArgSerGluAspGlyGluThrLeuAlaArgGluTyr 165
              |||:::         |||   :::   :::::::::           |||   :::    
Db        432 GATCTACGTCATCTCAGGGCAGTTCCTACAGATGAAGCAAGAGCTTTTGCAGAAAAGAAT 491
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Qy        166 GlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeuAlaPheLeu 185
              |||:::   |||:::|||||||||||||           |||||||||   ||||||
Db        492 GGTTTGTCATTCATTGAAACTTCGGCCCTAGACTCTACAAATGTAGAAGCTGCTTTTCAG 551

Qy        186 AlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGlnAlaAspGluProSerPheGln 205
              |||      |||:::   ||||||         |||                   :::
Db        552 ACAATTTTAACAGAGATT---TACCGCATTGTTTCTCAGAAGCAAATGTCAGACAGACGC 608

Qy        206 IleArgAspTyrValGluSerGlnLysLysArgSerSerCysCysSer 221
                  |||  |||      |||:::      |||      ||||||
Db        609 GAAAATGACAT-GTCTCCAAGCAACAATGTGGTTCCTATTCATGTTCC 655

RESULT 9
US-09-075-454-13
; Sequence 13, Application US/09075454
; Patent No. 6391580
;  GENERAL INFORMATION:
;    APPLICANT:  Hillman, Jennifer L.
;    APPLICANT:  Tang, Y. Tom
;    APPLICANT:  Lal, Preeti
;    APPLICANT:  Guegler, Karl J.
;    APPLICANT:  Corley, Neil C.
;    APPLICANT:  Patterson, Chandra
;    APPLICANT:  Batra, Sajeev
;    APPLICANT:  Baughn, Mariah R.
;    TITLE OF INVENTION:  RAS PROTEINS
;    NUMBER OF SEQUENCES:  14
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  INCYTE PHARMACEUTICALS, INC.
;      STREET:  3174 Porter Drive
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  US
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  Word Perfect 6.1/MS-DOS 6.2
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/075,454
;      FILING DATE:  Herewith
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/766,551
;      FILING DATE:  DECEMBER 12, 1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Cerrone, Michael C.
;      REGISTRATION NUMBER:  39,132
;      REFERENCE/DOCKET NUMBER:  PF-0168-1 CIP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  650-855-0555
;      TELEFAX:  650-845-4166
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  13:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  803 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    IMMEDIATE SOURCE:
;      LIBRARY:  OVARTUT10
;      CLONE:  2703745
US-09-075-454-13

Alignment Scores:
Pred. No.:              4.55e-41      Length:          803
Score:                  372.00        Matches:         89
Percent Similarity:     54.95%        Conservative:    33
Best Local Similarity:  40.09%        Mismatches:      73
Query Match:            32.35%        Indels:          27
DB:                     4             Gaps:            5

US-09-817-199B-2 (1-223) x US-09-075-454-13 (1-803)

Qy         23 SerProSerTyrAspLeuThrGly---------------------------------- 30
              ||||||      ||||||
Db          9 TCGCCCCAGACAGACCTGGTAGATGACAACGCTAAATCTTTTAGCTCACAGAAGGCTTAC 68

Qy         31 LysValMetLeuLeuGlyAspThrGlyValGlyLysThrCysPheLeuIleGln-PheLy 50
              |||:::::::|||   ||||||      ||||||||||:::   ||||||::::::
Db         69 AAGATTGTACTTGCTGGGGACGCTGCAGTGGGGAAGTCTAGTTTCCTCATGGAGACTTTG 128

Qy         50 sAspGlyAlaPheLeuSerGlyThrPheIleAlaThrValGlyIleAspPheArgAsnLy 70
                  |||                  ||||||:::|||:::||||||:::   ||
Db        129 CAAGAATGAATTTCGAGAA---AATATAAGCGCCACCCTGGGAGTTGATTTCCAAATGAA 185

Qy         70 sValValThrValAspGlyValArgValLysLeuGlnIleTrpAspThrAlaGlyGlnGl 90
              |  :::  |||||||||  |||      ||||||:::||||||||||||||||||||
Db        186 AACCCTCATTGTGGATGGAGAACGAACAGTTCTGCAGCTCTGGGATACAGCTGGTCAGGA 245

Qy         90 uArgPheArgSerValThrHisAlaTyrTyrArgAspAlaGlnAlaLeuLeuLeuLeuTy 110
              ||||||||||||:::      :::|||:::|||   |||      :::||||||||||
Db        246 GAGATTCAGAAGTATTGCCAAGTCTTACTTCAGAAAGGCAGATGGTGTTTTGCTGCTGTA 305

Qy        110 rAspIleThrAsnLysSerSerPheAspAsnIleArgAlaTrpLeuThrGluIleHisGl 130
              |||:::|||   :::   ||||||   |||||||||   |||:::      |||   ::
Db        306 TGATGTTACATGTGAGAAAAGCTTTCTTAACATACGAGAATGGGTAGATATGATTGAGGA 365

Qy        130 uTyrAlaGlnArgAspValValIleMetLeuLeuGlyAsnLysAlaAspMet-------- 147
              :   |||      |||   |||||||||:::||||||||||||||:::
Db        366 TGCAGCCCATGAGACTGTTCCCATTATGCTGGTAGGAAACAAGGCTGACATTCGTGACAC 425

Qy        148 ----------SerSerGluArgValIleArgSerGluAspGlyGluThrLeuAlaArgGl 164
                         ::::::   :::            ||||||   ||||||
Db        426 TGCTGCTACAGAGGGACAAAAATGTGTCCCAGGGCACTTTGGAGAGAAACTGGCCATGAC 485

Qy        164 uTyrGlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeuAlaPh 184
              ||||||      |||   ||||||||||||||   |||   |||:::      |||
Db        486 GTATGGGGCATTATTCTGTGAAACAAGTGCCAAAGATGGTTCTAACATAGTGGAGGCTGT 545

Qy        184 eLeuAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGlnAlaAspGluProSerPh 204
              |||   :::|||:::|||:::|||   |||                  :::   |||
Db        546 TCTGCACCTTGCTCGAGAAGTGAAAAAGAGAACTGAC---------AAGGATGACAGCAG 596

Qy        204 eGlnIleArgAspTyrValGluSerGlnLysLysArgSer-----------SerCysCy 220
              |||   :::        :::      |||:::|||           :::|||||
Db        597 ATCCATTACCAATCTAACCGGGACCAATTCCAAAAAGTCACCACAGATGAAGAATTGTTG 656

Qy        220 sSer 221
              |:::
Db        657 CAAT 660

RESULT 10
US-08-773-423-4
; Sequence 4, Application US/08773423
; Patent No. 5869291
;  GENERAL INFORMATION:
;    APPLICANT:  Hillman, Jennifer L.
;    APPLICANT:  Goli, Surya K.
;    APPLICANT:  Bandman, Olga
;    TITLE OF INVENTION:  NOVEL RAB PROTEINS
;    NUMBER OF SEQUENCES:  9
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Incyte Pharmaceuticals, Inc.
;      STREET:  3174 Porter Drive
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
```

```
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/773,423
;      FILING DATE:  Herewith
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Billings, Lucy J.
;      REGISTRATION NUMBER:  36,749
;      REFERENCE/DOCKET NUMBER:  PF-0183 US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415-855-0555
;      TELEFAX:  415-845-4166
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  847 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    IMMEDIATE SOURCE:
;      LIBRARY:  Consensus
;      CLONE:  Consensus
US-08-773-423-4

Alignment Scores:
Pred. No.:              2.92e-39      Length:          847
Score:                  359.00        Matches:         77
Percent Similarity:     56.59%        Conservative:    39
Best Local Similarity:  37.56%        Mismatches:      79
Query Match:            31.22%        Indels:          10
DB:                     2             Gaps:            2

US-09-817-199B-2 (1-223) x US-08-773-423-4 (1-847)

Qy         26 TyrAspLeuThrGlyLysValMetLeuLeuGlyAspThrGlyValGlyLysThrCysPhe 45
              |||:::         ||||||:::|||:::|||::::::|||||||||||||||||
Db         95 TATAACTTTGTCTTCAAGGTGGTGCTGATCGGCGAATCAGGTGTGGGGAAGACCAATCTA 154

Qy         46 LeuIleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIleAlaThrValGlyIle 65
              |||   :::|||            |||   |||                |||:::|||:::
Db        155 CTCTCCCGATTCACGCGCAATGAGTTC---AGCCACGACAGCCGCACCACCATCGGGGTT 211

Qy         66 AspPheArgAsnLysValValThrValAspGlyValArgValLysLeuGlnIleTrpAsp 85
              :::|||      :::   |||  :::            ||||||  ||||||||||||
Db        212 GAGTTCTCCACCCGCACTGTGATGTTGGGCACCGCTGCTGTCAAGGCTCAGATCTGGGAC 271

Qy         86 ThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrArgAspAlaGlnAla 105
              |||||||||   |||||:::|||::::::|||   ||||||||||   |||
Db        272 ACAGCTGGCCTGGAGCGGTACCGAGCCATCACCTCGGCGTACTATCGTGGTGCAGTGGGG 331

Qy        106 LeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnIleArgAlaTrpLeu 125
                 ||||||:::::::|||:::|||         ::::::      :::      ||||||
Db        332 GCCCTCCTGGTGTTTGACCTAACCAAGCACCAGACCTATGCTGTGGTGGAGCGATGGCTG 391

Qy        126 ThrGluIleHisGluTyrAlaGlnArgAspValValIleMetLeuLeuGlyAsnLysAla 145
              |||:::::::::::|||:::      :::|||:::|||||||:::|||||||||:::
Db        392 AAGGAGCTCTATGACCATGCTGAAGCCACGATCGTCGTCATGCTCGTGGGTAACAAAAGT 451

Qy        146 AspMetSerSerGluArgValIleArgSerGluAspGlyGluThrLeuAlaArgGluTyr 165
              |||:::|||      |||   :::  :::|||:::            |||
Db        452 GACCTCAGCCAGGGCCGGGAAGTGCCCACTGAGGAGGCCCGAATGTTCGCTGAAAACAAT 511

Qy        166 GlyValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeuAlaPheLeu 185
              |||:::   ||||||||||||||||||          ||||||||||||||||||
Db        512 GGACTGCTCTTCCTGGAGACCTCAGCCCTGGACTCTACCAATGTTGAGCTAGCCTTTGAG 571

Qy        186 AlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGlnAlaAspGluPro--------- 202
                 :::   ||||||:::      :::          |||
Db        572 ACTGTCCTGAAAGAAATCTTTGCGAAGGTGTCCAAGCAGAGACAGAACAGCATCCGGACC 631

Qy        203 ------------------SerPheGlnIleArgAspTyrValGluSerGlnLysLysArg 216
                                |||   |||                          :::||||||
Db        632 AATGCCATCACTCTGGGCAGTGCCCAGGNTGGACAGGAGCCTGGCCCTGGGGAGAAGAGG 691

Qy        217 SerSerCysCysSer 221
                 :::   |||   |||
Db        692 GCCTGTTGCATCAGC 706

RESULT 11
US-08-773-423-6
; Sequence 6, Application US/08773423
; Patent No. 5869291
;  GENERAL INFORMATION:
;    APPLICANT:  Hillman, Jennifer L.
;    APPLICANT:  Goli, Surya K.
;    APPLICANT:  Bandman, Olga
;    TITLE OF INVENTION:  NOVEL RAB PROTEINS
;    NUMBER OF SEQUENCES:  9
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Incyte Pharmaceuticals, Inc.
;      STREET:  3174 Porter Drive
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/773,423
;      FILING DATE:  Herewith
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Billings, Lucy J.
;      REGISTRATION NUMBER:  36,749
;      REFERENCE/DOCKET NUMBER:  PF-0183 US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415-855-0555
;      TELEFAX:  415-845-4166
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1175 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    IMMEDIATE SOURCE:
;      LIBRARY:  Consensus
;      CLONE:  Consensus
US-08-773-423-6

Alignment Scores:
Pred. No.:              2.45e-31      Length:          1175
Score:                  302.50        Matches:         73
Percent Similarity:     53.54%        Conservative:    33
Best Local Similarity:  36.87%        Mismatches:      79
Query Match:            26.30%        Indels:          13
DB:                     2             Gaps:            6

US-09-817-199B-2 (1-223) x US-08-773-423-6 (1-1175)

Qy         31 LysValMetLeuLeuGlyAspThrGlyValGlyLysThrCysPheLeuIleGlnPheLys 50
              ||||||:::|||||||||||   ||||||||||||:::      :::   ::::::
Db        111 AAAGTAATTCTCCTTGGAGATGGTGGAGTTGGGAAGAGTTCACTTATGAACAGATATGTA 170

Qy         51 AspGlyAlaPheLeuSerGlyThrPheIleAlaThrValGlyIleAspPheArgAsnLys 70
                    |||   :::      |||      |||:::|||:::::|||   ||||||
Db        171 ACTAATAAGTTTGATACCCAGCTCTTC---CATACAATAGGTGTGGAATTTTTAAATAAA 227
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Qy          71 ValValThrValAspGlyValArgValLysLeuGlnIleTrpAspThrAlaGlyGlnGlu 90
               :::   |||||||||      |||   :::||||||||||||||||||||||||||||
Db         228 GATTTGGAAGTGGATGGACATTTTGTTACCATGCAGATTTGGGACACGGCAGGTCAGGAG 287

Qy          91 ArgPheArgSerValThrHisAlaTyrTyrArgAspAlaGlnAlaLeuLeuLeuLeuTyr 110
               ||||||||||||:::         :::||||||   :::         ||||||   :::
Db         288 CGATTCCGAAGCCTGAGGACACCATTTTACAGAGGTTCTGACTGCTGCCTGCTTACTTTT 347

Qy         111 AspIleThrAsnLysSerSerPheAspAsnIleArgAlaTrpLeuThrGluIleHisGlu 130
               :::   :::      ||||||   |||:::      |||      |||
Db         348 AGTGTCGATGATTCACAAAGCTTCCAGAACTTAAGTAACTGGAAGAAAGAATTCATATAT 407

Qy         131 TyrAlaGln------------ArgAspValValIleMetLeuLeuGlyAsnLysAlaAsp 146
               ||||||                          ::::::||||||||||||   |||
Db         408 TATGCAGATGTGAAAGAGCCTGAGAGCTTTCCTTTTGTGATTCTGGGTAACAAGATTGAC 467

Qy         147 MetSerSerGluArgValIleArgSerGluAspGlyGluThrLeuAlaArgGluTyrGly 166
               :::   |||||||||   :::   :::|||:::   :::         |||:::   |||
Db         468 ATA---AGCGAACGGCAGGTGTCTACAGAAGAAGCCCAAGCTTGGTGCAGGGACAACGGC 524

Qy         167 ---ValProPheLeuGluThrSerAlaLysThrGlyMetAsnValGluLeuAlaPheLeu 185
                  |||:::   ||||||||||||||||         ||||||      ||||||
Db         525 GACTATCCTTATTTTGAAACAAGTGCAAAAGATGCCACAAATGTGGCAGCAGCCTTTGAG 584

Qy         186 AlaIleAlaLysGluLeu---------LysTyrArgAlaGlyHisGlnAlaAspGluPro 202
                  :::   :::         :::   ||:::   |||
Db         585 GAAGCGGTTCGAAGAGTTCTTGCTACCGAGGATAGGTCAGATCATTTGATTCAGACAGAC 644

Qy         203 SerPheGlnIleArgAspTyrValGluSerGlnLysLysArgSerSerCysCys 220
               :::      :::                |||      ||||||||||||
Db         645 ACAGTCAATCTTCAC---------CGAAAGCCCAAGCCTAGCTCATCTTGCTGT 689

RESULT 12
US-08-741-411-6
; Sequence 6, Application US/08741411
; Patent No. 6124116
;  GENERAL INFORMATION:
;    APPLICANT:  Bandman, Olga
;    APPLICANT:  Au-Young, Janice
;    TITLE OF INVENTION:  NOVEL RAB PROTEINS
;    NUMBER OF SEQUENCES:  12
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  INCYTE PHARMACEUTICALS, INC.
;      STREET:  3174 Porter Drive
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  US
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/741,411
;      FILING DATE:  Herewith
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Billings, Lucy J.
;      REGISTRATION NUMBER:  36,749
;      REFERENCE/DOCKET NUMBER:  PF-0139 US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415-855-0555
;      TELEFAX:  415-845-4166
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  820 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    IMMEDIATE SOURCE:
;      LIBRARY:
;      CLONE:  Consensus
US-08-741-411-6

Alignment Scores:
Pred. No.:                1.05e-30      Length:          820
Score:                    296.00        Matches:         71
Percent Similarity:       49.52%        Conservative:    32
Best Local Similarity:    34.13%        Mismatches:      71
Query Match:              25.74%        Indels:          34
DB:                       3             Gaps:            4

US-09-817-199B-2 (1-223) x US-08-741-411-6 (1-820)

Qy          20 ProProCysSerProSerTyrAspLeuThrGlyLysValMetLeuLeuGlyAspThrGly 39
               |||      :::|||||||               |||::::::|||||||||
Db         159 CCCAGGGCTGCCCCCAGCCAGCCCCGTGTGTTCAAGCTGGTTCTCCTGGGAAGTGGCTCC 218

Qy          40 ValGlyLysThrCysPheLeuIleGlnPheLysAspGlyAlaPheLeuSerGlyThrPhe 59
               ||||||
Db         219 GTGGGTGCG---------------------------------------------------- 227

Qy          60 IleAlaThrValGlyIleAspPheArgAsnLysValValThrValAspGlyValArgVal 79
                                  |||      |||   |||   |||           :::
Db         228 --------------------TTCTTCACAAAGGAGGTGGATGTGGGTGCCACCTCTCTG 266

Qy          80 LysLeuGlnIleTrpAspThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyr 99
               ||||||:::|||||||||||||||||||||||:::::   ||||||   |||   |||
Db         267 AAGCTTGAGATCTGGGACACAGCTGGCCAGGAGAAGTACCACAGCGTCTGCCACCTCTAC 326

Qy         100 TyrArgAspAlaGlnAlaLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAsp 119
               :::|||   |||   |||   ||||||:::|||||||||||   |||   ||||||
Db         327 TTCAGGGGTGCCAACGCTGCGCTTCTGGTGTACGACATCACCAGGAAGGATTCCTTCCTC 386

Qy         120 AsnIleArgAlaTrpLeuThrGluIleHisGluTyrAlaGln---ArgAspValValIle 138
                  :::   ||||||   ::::::   |||              :::|||::::::
Db         387 AAGGCTCAGCAGTGGCTGAAGGACCTGGAGGAGGAGCTGCACCCAGGAGAAGTCCTGGTG 446

Qy         139 MetLeuLeuGlyAsnLysAlaAspMetSerSerGluArgValIleArgSerGluAspGly 158
               ||||||:::|||||||||   |||:::|||   ||||||   :::      :::::|||
Db         447 ATGCTGGTGGGCAACAAGACGGACCTCAGCCAGGAGCGGGAGGTGACCTTCCAGGAAGGG 506

Qy         159 GluThrLeuAlaArgGluTyrGlyValProPheLeuGluThrSerAlaLysThrGlyMet 178
               :::      |||            :::   |||:::|||||||||||||||||
Db         507 AAGGAGTTTGCCGACAGCCAGAAGTTGCTGTTCATGGAAACTTCGGCCAAACTGAACCAC 566

Qy         179 AsnValGluLeuAlaPheLeuAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisGln 198
               |||         |||      :::|||:::||||||      |||
Db         567 CAGGTGTCGGAGGTGTTCAATACAGTGGCCCAAGAGCTACTGCAGAGA------------ 614

Qy         199 AlaAspGluProSerPheGlnIleArgAspTyrVal--------------GluSerGln 213
               :::||||||            :::|||                          :::
Db         615 AGCGACGAGGAGGGCCAGGCTCTACGGGGGGATGCAGCTGTGGCTCTGAACAAGGGGCCC 674

Qy         214 LysLysArgSerSerCysCysSer 221
               :::::::::   ||||||:::
Db         675 GCGAGGCAGGCCAAATGCTGCGCC 698

RESULT 13
US-09-075-454-11
; Sequence 11, Application US/09075454
; Patent No. 6391580
;  GENERAL INFORMATION:
;    APPLICANT:  Hillman, Jennifer L.
;    APPLICANT:  Tang, Y. Tom
;    APPLICANT:  Lal, Preeti
;    APPLICANT:  Guegler, Karl J.
;    APPLICANT:  Corley, Neil C.
;    APPLICANT:  Patterson, Chandra
;    APPLICANT:  Batra, Sajeev
```

```
;    APPLICANT:  Baughn, Mariah R.
;    TITLE OF INVENTION:  RAS PROTEINS
;    NUMBER OF SEQUENCES:  14
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  INCYTE PHARMACEUTICALS, INC.
;      STREET:  3174 Porter Drive
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  US
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  Word Perfect 6.1/MS-DOS 6.2
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/075,454
;      FILING DATE:  Herewith
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/766,551
;      FILING DATE:  DECEMBER 12, 1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Cerrone, Michael C.
;      REGISTRATION NUMBER:  39,132
;      REFERENCE/DOCKET NUMBER:  PF-0168-1 CIP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  650-855-0555
;      TELEFAX:  650-845-4166
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1533 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    IMMEDIATE SOURCE:
;      LIBRARY:  PROSTUT08
;      CLONE:  1651593
US-09-075-454-11

Alignment Scores:
Pred. No.:              4.62e-30      Length:          1533
Score:                  294.50        Matches:         76
Percent Similarity:     53.36%        Conservative:    51
Best Local Similarity:  31.93%        Mismatches:      88
Query Match:            25.61%        Indels:          23
DB:                     4             Gaps:            7

US-09-817-199B-2 (1-223) x US-09-075-454-11 (1-1533)

Qy          2 ThrGlyThrProGlyAlaValAlaThrArgAspGlyGluAlaProGluArgSerProPro 21
              |||||||||            :::|||           ||||||   ||||||
Db        462 ACGGGCACA------AAGACTTCCACCCCCGCGTCACCTGCGCCTGCCAGGAGCACCGGA 515

Qy         22 CysSerProSerTyrAspLeu--ThrGlyLysValMetLeuLeuGlyAspThrGlyValG 41
                 :::|||      ||||||       ||||||::::::::::||||||      ||||
Db        516 CAGGCACCGTGGGCAGATTTAAGATCTCCAAGGTCATTGTGGTGGGGGACCTGTCGGTGG 575

Qy         41 lyLysThrCysPheLeuIleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIleA 61
              ||||||||||   :::   :::|||           |||           :::   |
Db        576 GGAAGACTTGCCTCATTAATAGGTTCTGCAAAGACACCTTT---GATAAGAATTACAAGG 632

Qy         61 laThrValGlyIleAspPheArgAsnLysValValThrValAspGlyValArgValLysL 81
              |||||:::|||:::||||||     :::         |||   ||:::          |
Db        633 CCACCATTGGAGTGGACTTCGAGATGGAACGATTTGAGGTGCTGGGCATTCCCTTCAGTT 692

Qy         81 euGlnIleTrpAspThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrA 101
              |||||:::|||||||||||||||||||||||||||:::   :::         |||||||
Db        693 TGCAGCTTTGGGATACCGCTGGGCAGGAGAGGTTCAAATGCATTGCATCAACCTACTATA 752

Qy        101 rgAspAlaGlnAlaLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnI 121
              ||   |||||||||:::::::::::::::::::::   :::   :::|||   ::::::

Db        753 GAGGAGCTCAAGCCATCATCATTGTCTTCAACCTGAATGATGTGGCATCTCTGGAACATA 812

Qy        121 leArgAlaTrpLeuThrGlu---IleHisGluTyrAlaGlnArgAspValValIleMetL 140
                 :::   ||||||   :::   :::   |||               |||::::::   |
Db        813 CCAAGCAGTGGCTGGCCGATGCCCTGAAGGAGAATGACCCTTCCAGTGTGCTTCTCTTCC 872

Qy        140 euLeuGlyAsnLysAlaAspMetSer------SerGluArgValIleArgSerGluAspG 158
              ||:::|||:::|||   |||:::|||     ::::::      :::       :::|||
Db        873 TTGTAGGTTCCAAGAAGGATCTGAGTACCCCTGCTCAGTATGCGCTGATGGAGAAAGACG 932

Qy        158 lyGluThrLeuAlaArgGluTyrGlyValProPheLeuGluThrSerAlaLysThrGlyM 178
                    :::|||:::|||           :::         |||:::   ||||||
Db        933 CCCTCCAGGTGGCCCAGGAGATGAAGGCTGAGTACTGGGCAGTCTCATCTCTCACTGGTG 992

Qy        178 etAsnValGluLeuAlaPheLeuAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisG 198
                 ||||||         |||      :::|||      |||   :::   |||
Db        993 AGAATGTCCGAGAATTCTTCTTCCGTGTGGCA---GCACTGACCTTTGAGGCCAATGTGC 1049

Qy        198 lnAlaAsp---------GluProSerPheGlnIleArgAsp------------------ 208
                 |||:::          :::   :::|||   |||
Db       1050 TGGCTGAGCTGGAGAAATCGGGGGCTCGACGCATTGGGGATGTTGTCCGCATCAACAGTG 1109

Qy        209 -------------TyrValGluSerGlnLysLysArgSerSerCysCys 220
                          |||:::   :::   ||||||:::   :::|||||||
Db       1110 ATGACAGCAACCTCTACCTAACTGCCAGCAAGAAGAAGCCCACATGTTGC 1159

RESULT 14
US-09-075-454-8
; Sequence 8, Application US/09075454
; Patent No. 6391580
;  GENERAL INFORMATION:
;    APPLICANT:  Hillman, Jennifer L.
;    APPLICANT:  Tang, Y. Tom
;    APPLICANT:  Lal, Preeti
;    APPLICANT:  Guegler, Karl J.
;    APPLICANT:  Corley, Neil C.
;    APPLICANT:  Patterson, Chandra
;    APPLICANT:  Batra, Sajeev
;    APPLICANT:  Baughn, Mariah R.
;    TITLE OF INVENTION:  RAS PROTEINS
;    NUMBER OF SEQUENCES:  14
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  INCYTE PHARMACEUTICALS, INC.
;      STREET:  3174 Porter Drive
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  US
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  Word Perfect 6.1/MS-DOS 6.2
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/09/075,454
;      FILING DATE:  Herewith
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/766,551
;      FILING DATE:  DECEMBER 12, 1996
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Cerrone, Michael C.
;      REGISTRATION NUMBER:  39,132
;      REFERENCE/DOCKET NUMBER:  PF-0168-1 CIP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  650-855-0555
;      TELEFAX:  650-845-4166
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1172 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
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;      TOPOLOGY:  linear
;    IMMEDIATE SOURCE:
;      LIBRARY:  KIDNNOT05
;      CLONE:  627565
US-09-075-454-8

Alignment Scores:
Pred. No.:              8.98e-30        Length:         1172
Score:                  291.00          Matches:        76
Percent Similarity:     53.78%          Conservative:   52
Best Local Similarity:  31.93%          Mismatches:     86
Query Match:            25.30%          Indels:         24
DB:                     4               Gaps:           8

US-09-817-199B-2 (1-223) x US-09-075-454-8 (1-1172)

Qy          2 ThrGlyThrProGlyAlaValAlaThrArgAspGlyGluAlaProGluArgSerProPro 21
              |||||||||          :::|||           ||||||   ||||||
Db        105 ACGGGCACA------AAGACTTCCACCCCCGCGTCACCTGCGCCTGCCAGGAGCACCGGA 158

Qy         22 CysSerProSerTyrAspLeu--ThrGlyLysValMetLeuLeuGlyAspThrGlyValG 41
                 :::|||   :::||||||        ||||||:::::::::||||||      ||||
Db        159 CAGGCACCG---TGGGATTTAAGATCTCCAAGGTCATTGTGGTGGGGGACCTGTCGGTGG 215

Qy         41 lyLysThrCysPheLeuIleGlnPheLysAspGlyAlaPheLeuSerGlyThrPheIleA 61
              ||||||||||   :::   :::|||           |||           :::   |
Db        216 GGAAGACTTGCCTCATTAATAGGTTCTGCAAAGACACCTTT---GATAAGAATTACAAGG 272

Qy         61 laThrValGlyIleAspPheArgAsnLysValValThrValAspGlyValArgValLysL 81
              |||||:::|||:::||||||      :::        |||   |||:::        |
Db        273 CCACCATTGGAGTGGACTTCGAGATGGAACGATTTGAGGTGCTGGGCATTCCCTTCAGTT 332

Qy         81 euGlnIleTrpAspThrAlaGlyGlnGluArgPheArgSerValThrHisAlaTyrTyrA 101
              |||||:::||||||||||||||||||||||||||:::   :::         |||||||
Db        333 TGCAGCTTTGGGATACCGCTGGGCAGGAGAGGTTCAAATGCATTGCATCAACCTACTATA 392

Qy        101 rgAspAlaGlnAlaLeuLeuLeuLeuTyrAspIleThrAsnLysSerSerPheAspAsnI 121
              ||   ||||||||:::::::::::::::::::::   :::   :::|||   ::::::
Db        393 GAGGAGCTCAAGCCATCATCATTGTCTTCAACCTGAATGATGTGGCATCTCTGGAACATA 452

Qy        121 leArgAlaTrpLeuThrGlu---IleHisGluTyrAlaGlnArgAspValValIleMetL 140
              :::   ||||||   :::   :::   |||           |||::::::   |
Db        453 CCAAGCAGTGGCTGGCCGATGCCCTGAAGGAGAATGACCCTTCCAGTGTGCTTCTCTTCC 512

Qy        140 euLeuGlyAsnLysAlaAspMetSer------SerGluArgValIleArgSerGluAspG 158
              ||:::|||:::|||   |||:::|||      ::::::      :::      :::|||
Db        513 TTGTAGGTTCCAAGAAGGATCTGAGTACCCCTGCTCAGTATGCGCTGATGGAGAAAGACG 572

Qy        158 lyGluThrLeuAlaArgGluTyrGlyValProPheLeuGluThrSerAlaLysThrGlyM 178
                    :::|||:::|||           :::         |||:::   ||||||
Db        573 CCCTCCAGGTGGCCCAGGAGATGAAGGCTGAGTACTGGGCAGTCTCATCTCTCACTGGTG 632

Qy        178 etAsnValGluLeuAlaPheLeuAlaIleAlaLysGluLeuLysTyrArgAlaGlyHisG 198
                ||||||        |||     :::|||     |||   :::   |||
Db        633 AGAATGTCCGAGAATTCTTCTTCCGTGTGGCA---GCACTGACCTTTGAGGCCAATGTGC 689

Qy        198 lnAlaAsp---------GluProSerPheGlnIleArgAsp------------------ 208
              |||:::           :::   :::|||   |||
Db        690 TGGCTGAGCTGGAGAAATCGGGGGCTCGACGCATTGGGGATGTTGTCCGCATCAACAGTG 749

Qy        209 --------------TyrValGluSerGlnLysLysArgSerSerCysCys 220
                          |||:::   :::   ||||||:::   :::||||||
Db        750 ATGACAGCAACCTCTACCTAACTGCCAGCAAGAAGAAGCCCACATGTTGC 799

RESULT 15
US-08-741-411-2
; Sequence 2, Application US/08741411
; Patent No. 6124116
;  GENERAL INFORMATION:
;    APPLICANT:  Bandman, Olga
;    APPLICANT:  Au-Young, Janice
;    TITLE OF INVENTION:  NOVEL RAB PROTEINS
;    NUMBER OF SEQUENCES:  12
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  INCYTE PHARMACEUTICALS, INC.
;      STREET:  3174 Porter Drive
;      CITY:  Palo Alto
;      STATE:  CA
;      COUNTRY:  US
;      ZIP:  94304
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ Version 1.5
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/741,411
;      FILING DATE:  Herewith
;      CLASSIFICATION:  424
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Billings, Lucy J.
;      REGISTRATION NUMBER:  36,749
;      REFERENCE/DOCKET NUMBER:  PF-0139 US
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  415-855-0555
;      TELEFAX:  415-845-4166
;      TELEX:
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  848 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    IMMEDIATE SOURCE:
;      LIBRARY:
;      CLONE:  Consensus
US-08-741-411-2

Alignment Scores:
Pred. No.:              4.1e-29         Length:         848
Score:                  284.50          Matches:        60
Percent Similarity:     53.11%          Conservative:   34
Best Local Similarity:  33.90%          Mismatches:     74
Query Match:            24.74%          Indels:         9
DB:                     3               Gaps:           2

US-09-817-199B-2 (1-223) x US-08-741-411-2 (1-848)

Qy         37 AspThrGlyValGlyLysThrCysPheLeuIleGlnPheLysAspGlyAlaPheLeuSer 56
              |||||||||||||||||:::      :::   :::|||           |||
Db        216 GACACTGGGGTTGGGAAATCAAGCATCGTGTGTCGATTTGTCCAGGATCACTTT---GAC 272

Qy         57 GlyThrPheIleAlaThrValGlyIleAspPheArgAsnLysValValThrValAspGly 76
                           |||:::|||      |||      |||   |||
Db        273 CACAACATCAGCCCTACTATTGGGGCATCTTTTATGACCAAAACTGTGCCTTGTGGAAAT 332

Qy         77 ValArgValLysLeuGlnIleTrpAspThrAlaGlyGlnGluArgPheArgSerValThr 96
                    |||      |||||||||||||||||||||||||||||   |||:::
Db        333 GAACTTCACAAGTTCCTCATCTGGGACACTGCTGGTCAGGAACGGTTTCATTCATTGGCT 392

Qy         97 HisAlaTyrTyrArgAspAlaGlnAlaLeuLeuLeuLeuTyrAspIleThrAsnLysSer 116
                 |||||||||   :::   |||   :::::::::|||||||||||   :::
Db        393 CCCATGTACTATCGAGGCTCAGCTGCAGCTGTTATCGTGTATGATATTACCAAGCAGGAT 452

Qy        117 SerPheAspAsnIleArgAlaTrpLeuThrGluIleHisGluTyrAlaGlnArgAspVal 136
              ||||||      ::::::   |||:::   |||:::   |||:::         ::::::
Db        453 TCATTTTATACCTTGAAGAAATGGGTCAAGGAGCTGAAAGAACATGGTCCAGAAAACATT 512

Qy        137 ValIleMetLeuLeuGlyAsnLysAlaAspMetSerSerGluArgValIleArgSerGlu 156
              |||:::   :::   |||||||||   |||:::|||      |||   :::      :::
Db        513 GTAATGGCCATCGCTGGAAACAAGTGCGACCTCTCAGATATTAGGGAGGTTCCCCTGAAG 572
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Qy        157 AspGlyGluThrLeuAlaArgGluTyrGlyValProPheLeuGluThrSerAlaLysThr 176
              |||   :::      |||       |||         :::|||||||||||||||
Db        573 GATGCTAAGGAATACGCTGAATCCATAGGTGCCATCGTGGTTGAGACAAGTGCAAAAAAT 632

Qy        177 GlyMetAsnValGluLeuAlaPheLeuAlaIleAlaLysGluLeuLysTyrArgAlaGly 196
                 :::|||:::|||      |||      |||:::::::::::::
Db        633 GCTATTAATATCGAAGAGCTCTTTCAAGGAATCAGCCGCCAGATCCCACCCTTGGACCCC 692

Qy        197 HisGln----------------------AlaAspGluProSerPheGln 205
              |||:::                          :::::::|||:::   |||
Db        693 CATGAAAATGGAAACAATGGAACAATCAAAGTTGAGAAGCCAACCATGCAA 743

Search completed: June 23, 2003, 19:51:44
Job time : 53 secs
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